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Specific Heats of PrNiSn and NdNiSn

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We report the results of magnetic and specific heat experiments on the orthorhombic PrNiSn and NdNiSn single crystals which were performed to explore the ground states of the compounds and the role of the crystalline electric field (CEF) in the compounds. The data for PrNiSn do not show any ordering down to 0.9 K. The temperature dependence of the magnetic entropy in PrNiSn suggests a non magnetic singlet ground state. The entropy at 30 K for PrNiSn is less than the corresponding free ion entropy values, suggesting a large CEF contribution to the specific heat in the compound. NdNiSn exhibits an antiferromagnetic order below T_N = 2.8 K. A sharp jump (12 J/mol K) in the specific heat near the T_N confirms the bulk magnetic ordering.